## ABSTRACT

The present invention relates to a method of treatment of Parkinson's disease, and to the use of antisense oligonucleotides or triplex oligonucleotides introduced into targeted brain structures to decrease the function of brain circuits known to be overactive in the Parkinsonian brain. Antisense or triplex oligonucleotides are targeted to the internal globus pallidus and/or substantia nigra pars reticulata (SNr) where the expression of glutamic acid decarboxylase ($GAD_{67}$, $GAD_{65}$, or a combination of the two isoforms) is downregulated. The present invention also relates to a method of treatment of Parkinson's disease where antisense or triplex oligonucleotides are targeted to the internal globus pallidus and/or substantia nigra pars reticulata for the downregulation of glutamate receptors. The present invention further relates to a method of treatment of Parkinson's disease where antisense or triplex oligonucleotides are targeted to the thatlamic motor nuclei for the downregulation of GABA receptors.